

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claim 1. (Currently Amended) A computer-implemented method for determining parameters of an equivalent circuit representing a transmission section of an electrical network, where the transmission section is representable as having at least two interfaces with other sections of the network, wherein the method comprises the steps of

a) determining, for each of the interfaces a voltage phasor at the interface and a phasor of a current flowing through the interface, the measurements at the different interfaces being made essentially simultaneously, and

b) computing, from said voltage and current phasors, values of impedances constituting the equivalent circuit.

Claim 2. (Previously Presented) Method according to claim 1, wherein the transmission section is a transmission corridor having exactly two interfaces to other sections of the network.

Claim 3. (Previously Presented) Method according to claim 2, wherein a first interface connects the transmission corridor to a network section consisting predominantly of power generators, and a second interface connects the

transmission corridor to a network section consisting predominantly of power consumers.

Claim 4. (Previously Presented) Method according to claim 2, wherein the transmission network is represented by one of a T-equivalent and a π -equivalent circuit.

Claim 5. (Previously Presented) Method according to claim 3, comprising the further step of computing parameters of a Thévenin equivalent of a network constituted by the transmission section and by the network section consisting predominantly of power generators.

Claim 6. (Previously Presented) Method according to claim 1, wherein the transmission section comprises three or more interfaces to other sections of the network and the equivalent circuit comprises line impedances interconnecting the interfaces and shunt impedances connecting the interfaces to a common node.

Claim 7. (Previously Presented) Method according to claim 1, wherein at least one interface comprises at least two physical power lines, and the voltage phasor at the interface is determined as a weighted sum of the voltages at the power lines.

Claim 8. (Previously Presented) Method according to claim 7, wherein a current phasor representing a current through the interface is computed from the

voltage phasor at the interface and a power flow through the power lines constituting the interface.

Claim 9. (Currently Amended) A Computer computer program embodied on a computer readable medium for determining parameters of an equivalent circuit representing a transmission section of an electrical network which is loadable and executable on a data ~~processing~~ processing unit and which computer program, when being executed, performs the steps according to claim 1.

Claim 10. (Previously Presented) Data processing system for determining parameters of an equivalent circuit representing a transmission section of an electrical network comprising means for carrying out the steps of the method according to claim 1.

Claim 11. (Previously Presented) Method according to Claim 1, wherein the transmission section is a transmission corridor having exactly two interfaces to other sections of the network, and wherein a first interface connects the transmission corridor to a generation section comprising power generators, the method comprising:

computing, from values of impedances constituting an equivalent circuit representing the transmission section and from a Thévenin equivalent of the generation section, parameters of a second Thévenin equivalent of a network constituted by the transmission section and by the generation section.

Claim 12. (Previously Presented) Method according to Claim 11, comprising:

performing a stability analysis of the electrical network based on the second Thévenin equivalent.

Claim 13. (New) The method of claim 1, comprising:

(c) displaying changes in the equivalent circuit based on the computed values of impedances.

Claim 14. (New) The computer program embodied on a computer readable medium of claim 9, causing a computer to perform the step of:

(c) displaying changes in the equivalent circuit based on the computed values of impedances.